

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-311869

(43)Date of publication of application : 02.12.1997

(51)Int.Cl. G06F 17/30
G06F 12/00
G06F 12/00
G06F 13/00
H04L 12/00

(21)Application number : 08-130283

(71)Applicant : TOSHIBA CORP

(22)Date of filing : 24.05.1996

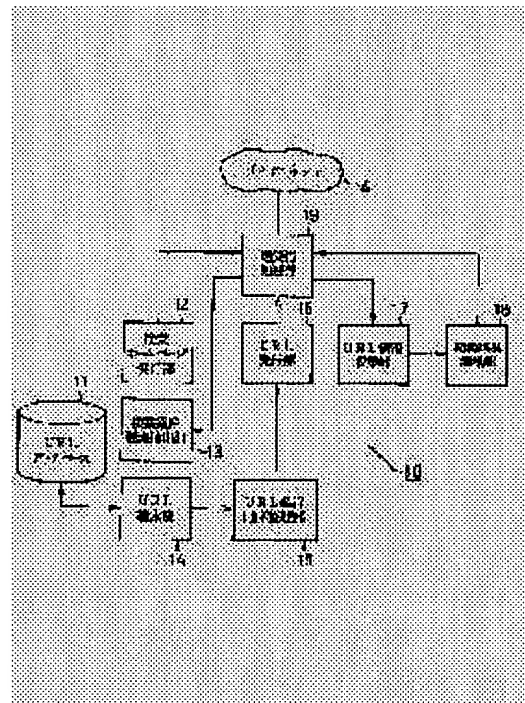
(72)Inventor : KUROSAWA HARUHIRO

(54) INTERNET RETRIEVING SERVER

(57)Abstract:

PROBLEM TO BE SOLVED: To realize a retrieving server obtaining desired information from many URLs of WWW(World wide web) distributing the report by only inputting a retrieving condition from a client.

SOLUTION: In this internet retrieving server, when a retrieving request is sent from the client, a home page issuing part 12 issues a retrieving home page to the client first to allow the client to write the retrieving condition. The written retrieving condition is analyzed to extract the element of the retrieving condition by a retrieving condition element extracting part 13 and concerning this element of the retrieving condition, an URL retrieving part 14 accesses to an URL data base 11 to extract URL providing related information. Then concerning extracted URL, URL information collecting parts 16 and 17 successively issues the URL address of each and collects information from pertinent URL, and an editing part 18 edits the collecting result to transmit to the client.



LEGAL STATUS

[Date of request for examination] 03.03.2000

[Date of sending the examiner's decision of rejection] 28.10.2003

[Kind of final disposal of application other than the examiner's decision of rejection or

application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's
decision of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] The Internet retrieval server characterized by providing the following The retrieval homepage issue section which publishes a retrieval homepage to a client A retrieval condition receive section which receives retrieval conditions which said client wrote in said retrieval homepage The retrieval condition element extract section which analyzes said retrieval conditions received in said retrieval condition receive section, and extracts a retrieval condition element A URL data base which contrasted URL corresponding to various retrieval condition elements and each, The URL retrieval section which searches URL which accesses and corresponds to said URL data base about a retrieval condition element which said retrieval condition element extract section extracted, The URL information gathering section which collects information from URL which carries out sequential issue of each URL address, and corresponds based on a retrieval result of said URL retrieval section, and the URL information transmitting section which transmits said URL information which said URL information gathering section collected to said client

[Claim 2] The Internet retrieval server according to claim 1 which is equipped with the URL issue procedure decision section which opts for those address issue procedures based on predetermined priority conditions, and is passed to said URL information gathering section in the sequence about two or more URL which said URL retrieval section searched, and changes.

[Claim 3] The Internet retrieval server according to claim 2 of which said URL information transmitting section is equipped with a function to edit into a predetermined format said URL information which said URL information gathering section collected, and consists.

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] This invention relates to the Internet retrieval server.

[0002]

[Description of the Prior Art] In recent years, the spread of the Internet is progressing rapidly, can read the various homepages which the general user of a computer accesses using a WWW (World Wide Web) browser easily, and is opening on WWW, and can acquire required information.

[0003] Drawing 8 shows the connection structure of a system the conventional Internet and in the company [LAN], and there is a client 3 of a large number which have a WWW browser function connected to the in-house server 2 and this in in the company [LAN / 1], and it is connected to the external Internet 4 through the gateway 5 which served also as security. The WWW server 6 provides in the company and external with WWW service.

[0004]

[Problem(s) to be Solved by the Invention] Many WWW servers are connected all over the world with the spread of the Internet, and the original homepage is opened, and each WWW server needs to specify URL (Uniform Resource Locator), in order to access it.

[0005] However, the number of homepages currently opened on WWW as shown in drawing 9 goes up innumerable. When it is going to acquire the information which a certain client 3 accesses WWW and he needs truly It is difficult to specify URL which offers the information to need from the beginning on WWW. For example, the homepage H1 of one WWW server 1 is accessed first. Access the related pan connected with this homepage H1 in hyperlink format at the lower layer homepage H11, H12;H121, H122;H1221, --, etc., or Or other WWW servers 2, a server 3, and the method of -- of moving to the homepage must be taken.

[0006] so, in so to speak accessing WWW by groping and the method [*****] in this way Since collecting the information needed truly will take much time amount, Refer to the so-called yellow page marketed beforehand, and URL is taken up. URL of the homepage of the search service which takes the method of accessing the URL, or is offered on WWW is accessed first. Then, the method of accessing again URL which found out URL which offers the information which he needs and was found out after that may be taken.

[0007] However, even in this case, the client needed to search by itself URL of the homepage which is likely to offer the information needed by itself, needed to take up that URL, needed to access each, and had the trouble that required information gathering, in addition, took time amount and time and effort.

[0008] A suitable means to choose and collect only the information needed truly out of the information on a homepage furthermore opened is not seen.

[0009] This invention was made in view of such a conventional trouble, and a retrieval homepage for a retrieval demand to make retrieval conditions inputting from a client is published. After making a client write in retrieval conditions there and receiving the retrieval condition information Extract a retrieval condition element from retrieval conditions automatically, and make an activity the URL data base with which the server itself is equipped further, and URL is extracted. Each of the URL address is accessed automatically, information is collected automatically one by one, the procedure of transmitting a retrieval result to a client is taken, and it aims at offering the Internet retrieval server which can perform fine retrieval data utility according to the demand of a client.

[0010]

[Means for Solving the Problem] The Internet retrieval server of invention of claim 1 The retrieval

homepage issue section which publishes a retrieval homepage to a client, With a retrieval condition receive section which receives retrieval conditions which said client wrote in said retrieval homepage The retrieval condition element extract section which analyzes said retrieval conditions received in said retrieval condition receive section, and extracts a retrieval condition element, A URL data base which contrasted URL corresponding to various retrieval condition elements and each, The URL retrieval section which searches URL which accesses and corresponds to said URL data base about a retrieval condition element which said retrieval condition element extract section extracted, Based on a retrieval result of said URL retrieval section, it has the URL information gathering section which collects information from URL which carries out sequential issue of each URL address, and corresponds, and the URL information transmitting section which transmits said URL information which said URL information gathering section collected to said client.

[0011] When a retrieval demand is sent through the Internet from a client, the retrieval homepage issue section publishes a retrieval homepage to that client, and makes retrieval conditions write in a client first in the Internet retrieval server of invention of this claim 1.

[0012] Then, if a client writes in a retrieval homepage, the written-in retrieval condition receives in a retrieval condition receive section, and the URL which offers in information with which the URL retrieval section is accessed and related to a URL data base about a retrieval condition element which analyzed retrieval conditions, and extracted a retrieval condition element, and the retrieval condition element extract section extracted further by the retrieval condition element extract section will extract. And about URL which the URL retrieval section extracted, the URL information gathering section carries out sequential issue of each URL address, collects information from corresponding URL, and transmits the collection result to a client by the URL information transmitting section.

[0013] In this way, if there is a retrieval demand from a client, the retrieval condition will be made to write in an own homepage. URL which analyzes the retrieval condition element and offers corresponding information is extracted. Those URL can be accessed automatically, information can be collected, a client can be provided with the result, information on desired can come to hand now only by assignment of retrieval conditions as a client, and information gathering using the Internet becomes very easy.

[0014] In the Internet retrieval server of claim 1, further, invention of claim 2 opts for those address issue procedures about two or more URL which said URL retrieval section searched based on predetermined priority conditions, and is equipped with the URL issue procedure decision section passed to said URL information gathering section in the sequence.

[0015] In the Internet retrieval server of invention of this claim 2, about two or more URL which the URL retrieval section searched, the issue procedure decision section opts for an address issue procedure in conformity with a predetermined priority determining condition, and according to an issue procedure of the determined URL address, the URL information gathering section accesses URL which carries out sequential relevance, and gathers information.

[0016] Therefore, efficient information gathering can be performed rather than it accesses disorderly about all searched URL.

[0017] Invention of claim 3 is equipped with a function in which said URL information transmitting section edits into a predetermined format said URL information which said URL information gathering section collected, in the Internet retrieval server of claim 2.

[0018] In the Internet retrieval server of invention of this claim 3, URL information on a large number which the URL information gathering section collected can be edited into a format predetermined in the URL information transmitting section, and it can transmit to a client, it will agree on retrieval conditions at a client, and only required information can distribute in an intelligible form.

[0019]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained in full detail based on drawing. Drawing 1 shows the system configuration of the gestalt of one operation of this invention, and in the company [LAN / 1] consists of forms where many clients 3 were connected to the in-house server 2. And in the company [LAN / 1] and the Internet 4 are connected through the gateway 5 which served as the purpose of security. The WWW server 6 is also prepared for in the company [this / LAN / 1].

[0020] The feature of this invention is in the point of having connected the retrieval server 10 further, in such an Internet system. And this retrieval server 10 consists of computers which have the functional configuration shown in drawing 2.

[0021] The retrieval server 10 is equipped with the URL data base 11 which changes on the contrast

table of many keywords used as a retrieval condition element, and URL relevant to those keywords. If an example is given, they will be the contents shown in drawing 5 and drawing 6. Drawing 5 is the keyword table 21 and lists the keyword currently used in the URL table 22 shown in drawing 6. Therefore, if not listed by this keyword table 21, it will be supposed that retrieval is impossible. the URL table 22 shown in drawing 6 is a contrast table with the keyword which resembles much URL, respectively and is related. For example, URL called <http://www.tokyo.co.jp/sibaden> is also selling by mail order in the mass retailer in Tokyo and Shibuya, and handling items will be called personal computer related goods at large. Moreover, having also carried the price list is shown.

[0022] Moreover, URL called <http://www.osaka.co.jp/sakaden> is the mass retailer of home electronics also dealing with the personal computer related goods in Osaka and Nakanoshima, is also performing the mail order and shows that the price list is also carried.

[0023] And the retrieval server 10 needs to update periodically the URL table 22 of this URL data base 11, and performs it using various kinds of automatic retrieval tools called current and the so-called Internet robot.

[0024] The retrieval homepage issue section 12 which publishes the retrieval homepage for the retrieval server 10 explaining retrieval demand procedure to a user again, and making retrieval conditions input, The retrieval condition element extract section 13 which analyzes the retrieval conditions inputted from the client 3 through the retrieval homepage which this retrieval homepage issue section 12 publishes, and extracts a retrieval condition element, Based on the retrieval condition element extracted in this retrieval condition element extract section 13, the keyword list of the keyword table 21 of the URL data base 11 and URL tables 22 is referred to. The URL retrieval section 14 which takes up URL by which the keyword in agreement is listed, It has the URL issue sequence Processing Division 15 which determines the sequence of whether to publish from which URL based on the priority conditions set up beforehand about two or more URL which this URL retrieval section 14 took up.

[0025] The URL issue section 16 which accesses the homepage of the address with which the retrieval server 10 publishes URL one by one further about two or more URL which was able to be set in order by the URL issue sequence Processing Division 15, and WWW corresponds, The URL information gathering section 17 which collects the information on each homepage accessed by the URL issue section 16, It has the transceiver processing section 19 which accesses the retrieval result editorial department 18 which edits the collected URL information and transmits to a client 3, and the Internet, and performs transmit/receive control of a signal.

[0026] Next, actuation of the Internet retrieval server of the above-mentioned configuration is explained. If URL of the retrieval server 10 is specified through in the company [LAN / 1] from a client 3 and there is access as shown in drawing 3, the retrieval homepage issue section 12 of the retrieval server 10 will publish a retrieval homepage (Home Page), and will transmit to a client 3 (step S1).

[0027] In a client 3, a user inputs retrieval conditions for procedure explanation of this retrieval homepage according to reading and a predetermined procedure. Now, the retrieval conditions inputted from the client 3 presuppose that they were the contents shown in A1 of drawing 4. That is, in the retrieval condition element extract section 13 of the "retrieval to know price of each store since he wants to purchase personal computer of B company in A area" server 10, if retrieval conditions are received from a client 3 (step S2), a retrieval condition element will be extracted (step S3). Here, the element "A area", a "B company personal computer", and "each store price" is extracted (A2).

[0028] Then, the URL retrieval section 14 extracts the keyword contained in a retrieval condition element from the keyword table 21 of the URL data base 11, and takes up URL which has listed the extracted keyword from the URL table 22 (step S4). Here, URL1 - URLX are taken up as optimal URL (A3).

[0029] Then, about some URL1 which the URL retrieval section 14 took up in the URL issue sequence Processing Division 15 - URLX, based on certain priority conditions, it opts for the issue procedure of the URL address so that efficient retrieval can be performed (step S5). The method to which priority is given from URL which has the number of keywords which is best in agreement to the retrieval condition element of a client 3 is suitable for the decision of this priority foreword. However, priority conditions are set up beforehand, or priority conditions can be made to be able to check at the time of the retrieval condition input from a client 3, and giving priority to the technical field which gives priority to an area, giving priority to the name of a country, etc. can also adopt the method of setting up priority based on it. A4 shows the issue procedure for which it opted in this way.

[0030] Then, the URL issue section 16 publishes the URL address one by one about all URL listed according to the issue procedure for which it opted, accesses that homepage, and accumulates the

information on that homepage in the URL information gathering section 17 one by one (step S6 and A5 of drawing 4).

[0031] In this way, if information gathering to last URL3 is completed according to a predetermined address issue procedure, the retrieval result editorial department 18 will edit collection information into a predetermined report form, and will transmit to a client 3 (steps S8 and A6).

[0032] Now, it is as follows when actuation of the above-mentioned Internet retrieval server is explained still more concretely.

[0033] Suppose that the retrieval conditions of wanting to know the sale price of each store of a B company personal computer were written in the retrieval homepage which the retrieval server published from the client 3 in the Tokyo area.

[0034] If retrieval condition elements, such as the "Tokyo area", a "personal computer", "B company", and a "price", are extracted by the retrieval condition element detecting element 13 and the URL retrieval section 14 receives this in the retrieval server which received this URL by which "Tokyo", "Shinjuku", and "Shibuya" are listed as an area included in the "Tokyo area" is made into a candidate. URL by which the "personal computer" or the "personal computer", the "computer", and the "computer" are listed as a keyword relevant to a "B company personal computer" will be made into a candidate, and URL by which the "price" is listed further will be extracted as a candidate. Then, suppose that only URLa and URLb were taken up from the table 22 of drawing 6 .

[0035] Although it next determines whether these URLa(s) and URLb make priority either give in the URL issue sequence Processing Division 15, especially since the number of the keywords which were in agreement in this example is also equal and locally near, priority is not attached, but the information on that homepage is collected, information will be gathered in order of an extract, the address of URLa will be published first, the address of URLb will be published continuously, and information will be collected.

[0036] Then, the retrieval result collection section 18 will be edited into report format as shown in drawing 7 , and will transmit to a client 3. In addition, a "I store" is the identifier of the store which is opening the homepage of the address of URLa, and a "RO store" is the identifier of the store of the address of URLb here.

[0037] in this way, according to the Internet retrieval server of the gestalt of this operation, it is markedly alike in the time amount and the time and effort which the rest can take up URL corresponding to retrieval conditions by the Internet retrieval server side, can gather information, can obtain that result now as a report, and retrieval takes only with inputting retrieval conditions into the retrieval homepage which the user accessed URL of the Internet retrieval server and was opened from the client, and it can economize now.

[0038] In addition, although you may be the method which waits for while, as for the report from the Internet retrieval server, the client side had connected the circuit, and is obtained, after transmitting retrieval conditions, a circuit can once be cut, and the method which I have transmitted to the mail address of a client in the form of an electronic mail can also be taken here.

[0039]

[Effect of the Invention] If there is a retrieval demand from a client as mentioned above according to invention of claim 1 Make the retrieval condition write in an own homepage, and the retrieval condition element is analyzed. Since URL which offers the corresponding information is extracted, those URL is accessed automatically, information is collected and he is trying to provide a client with the result As a client, the information on desired can come to hand only by assignment of retrieval conditions, and information gathering using the Internet becomes very easy.

[0040] Since it opts for an address issue procedure, URL which carries out sequential relevance according to the issue procedure of the determined URL address is accessed in conformity with a predetermined priority determining condition and he is trying to gather information about two or more URL which the URL retrieval section extracted based on the retrieval conditions of a client according to invention of claim 2, efficient information gathering can be performed rather than it accesses disorderly about all URL extracted based on the retrieval conditions of a client.

[0041] According to invention of claim 3, the URL information on a large number which the URL information gathering section collected can be edited into a format predetermined in the URL information transmitting section, and it can transmit to a client, it agrees on retrieval conditions at a client, and only required information can distribute in an intelligible form.

· [Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] Many WWW servers are connected all over the world with the spread of the Internet, and the original homepage is opened, and each WWW server needs to specify URL (Uniform Resource Locator), in order to access it.

[0005] However, the number of homepages currently opened on WWW as shown in drawing 9 goes up innumably. When it is going to acquire the information which a certain client 3 accesses WWW and he needs truly It is difficult to specify URL which offers the information to need from the beginning on WWW. For example, the homepage H1 of one WWW server 1 is accessed first. Access the related pan connected with this homepage H1 in hyperlink format at the lower layer homepage H11, H12;H121, H122;H1221, --, etc., or Or other WWW servers 2, a server 3, and the method of -- of moving to the homepage must be taken.

[0006] so, in so to speak accessing WWW by groping and the method [*****] in this way Since collecting the information needed truly will take much time amount, Refer to the so-called yellow page marketed beforehand, and URL is taken up. URL of the homepage of the search service which takes the method of accessing the URL, or is offered on WWW is accessed first. Then, the method of accessing again URL which found out URL which offers the information which he needs and was found out after that may be taken.

[0007] However, even in this case, the client needed to search by itself URL of the homepage which is likely to offer the information needed by itself, needed to take up that URL, needed to access each, and had the trouble that required information gathering, in addition, took time amount and time and effort.

[0008] A suitable means to choose and collect only the information needed truly out of the information on a homepage furthermore opened is not seen.

[0009] This invention was made in view of such a conventional trouble, and a retrieval homepage for a retrieval demand to make retrieval conditions inputting from a client is published. After making a client write in retrieval conditions there and receiving the retrieval condition information Extract a retrieval condition element from retrieval conditions automatically, and make an activity the URL data base with which the server itself is equipped further, and URL is extracted. Each of the URL address is accessed automatically, information is collected automatically one by one, the procedure of transmitting a retrieval result to a client is taken, and it aims at offering the Internet retrieval server which can perform fine retrieval data utility according to the demand of a client.

[Translation done.]

*** NOTICES ***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

MEANS

[Means for Solving the Problem] The Internet retrieval server of invention of claim 1 The retrieval homepage issue section which publishes a retrieval homepage to a client, With a retrieval condition receive section which receives retrieval conditions which said client wrote in said retrieval homepage The retrieval condition element extract section which analyzes said retrieval conditions received in said retrieval condition receive section, and extracts a retrieval condition element, A URL data base which contrasted URL corresponding to various retrieval condition elements and each, The URL retrieval section which searches URL which accesses and corresponds to said URL data base about a retrieval condition element which said retrieval condition element extract section extracted, Based on a retrieval result of said URL retrieval section, it has the URL information gathering section which collects information from URL which carries out sequential issue of each URL address, and corresponds, and the URL information transmitting section which transmits said URL information which said URL information gathering section collected to said client.

[0011] When a retrieval demand is sent through the Internet from a client, the retrieval homepage issue section publishes a retrieval homepage to that client, and makes retrieval conditions write in a client first in the Internet retrieval server of invention of this claim 1.

[0012] Then, if a client writes in a retrieval homepage, the written-in retrieval condition receives in a retrieval condition receive section, and the URL which offers in information with which the URL retrieval section is accessed and related to a URL data base about a retrieval condition element which analyzed retrieval conditions, and extracted a retrieval condition element, and the retrieval condition element extract section extracted further by the retrieval condition element extract section will extract. And about URL which the URL retrieval section extracted, the URL information gathering section carries out sequential issue of each URL address, collects information from corresponding URL, and transmits the collection result to a client by the URL information transmitting section.

[0013] In this way, if there is a retrieval demand from a client, the retrieval condition will be made to write in an own homepage. URL which analyzes the retrieval condition element and offers corresponding information is extracted. Those URL can be accessed automatically, information can be collected, a client can be provided with the result, information on desired can come to hand now only by assignment of retrieval conditions as a client, and information gathering using the Internet becomes very easy.

[0014] In the Internet retrieval server of claim 1, further, invention of claim 2 opts for those address issue procedures about two or more URL which said URL retrieval section searched based on predetermined priority conditions, and is equipped with the URL issue procedure decision section passed to said URL information gathering section in the sequence.

[0015] In the Internet retrieval server of invention of this claim 2, about two or more URL which the URL retrieval section searched, the issue procedure decision section opts for an address issue procedure in conformity with a predetermined priority determining condition, and according to an issue procedure of the determined URL address, the URL information gathering section accesses URL which carries out sequential relevance, and gathers information.

[0016] Therefore, efficient information gathering can be performed rather than it accesses disorderly about all searched URL.

[0017] Invention of claim 3 is equipped with a function in which said URL information transmitting section edits into a predetermined format said URL information which said URL information gathering section collected, in the Internet retrieval server of claim 2.

[0018] In the Internet retrieval server of invention of this claim 3, URL information on a large number

which the URL information gathering section collected can be edited into a format predetermined in the URL information transmitting section, and it can transmit to a client, it will agree on retrieval conditions at a client, and only required information can distribute in an intelligible form.

[0019]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained in full detail based on drawing. Drawing 1 shows the system configuration of the gestalt of one operation of this invention, and in the company [LAN / 1] consists of forms where many clients 3 were connected to the in-house server 2. And in the company [LAN / 1] and the Internet 4 are connected through the gateway 5 which served as the purpose of security. The WWW server 6 is also prepared for in the company [this / LAN / 1].

[0020] The feature of this invention is in the point of having connected the retrieval server 10 further, in such an Internet system. And this retrieval server 10 consists of computers which have the functional configuration shown in drawing 2 .

[0021] The retrieval server 10 is equipped with the URL data base 11 which changes on the contrast table of many keywords used as a retrieval condition element, and URL relevant to those keywords. If an example is given, they will be the contents shown in drawing 5 and drawing 6 . Drawing 5 is the keyword table 21 and lists the keyword currently used in the URL table 22 shown in drawing 6 . Therefore, if not listed by this keyword table 21, it will be supposed that retrieval is impossible. the URL table 22 shown in drawing 6 is a contrast table with the keyword which resembles much URL, respectively and is related. For example, URL called <http://www.tokyo.co.jp/sibaden> is also selling by mail order in the mass retailer in Tokyo and Shibuya, and handling items will be called personal computer related goods at large. Moreover, having also carried the price list is shown.

[0022] Moreover, URL called <http://www.osaka.co.jp/sakaden> is the mass retailer of home electronics also dealing with the personal computer related goods in Osaka and Nakanoshima, is also performing the mail order and shows that the price list is also carried.

[0023] And the retrieval server 10 needs to update periodically the URL table 22 of this URL data base 11, and performs it using various kinds of automatic retrieval tools called current and the so-called Internet robot.

[0024] The retrieval homepage issue section 12 which publishes the retrieval homepage for the retrieval server 10 explaining retrieval demand procedure to a user again, and making retrieval conditions input, The retrieval condition element extract section 13 which analyzes the retrieval conditions inputted from the client 3 through the retrieval homepage which this retrieval homepage issue section 12 publishes, and extracts a retrieval condition element, Based on the retrieval condition element extracted in this retrieval condition element extract section 13, the keyword list of the keyword table 21 of the URL data base 11 and URL tables 22 is referred to. The URL retrieval section 14 which takes up URL by which the keyword in agreement is listed, It has the URL issue sequence Processing Division 15 which determines the sequence of whether to publish from which URL based on the priority conditions set up beforehand about two or more URL which this URL retrieval section 14 took up.

[0025] The URL issue section 16 which accesses the homepage of the address with which the retrieval server 10 publishes URL one by one further about two or more URL which was able to be set in order by the URL issue sequence Processing Division 15, and WWW corresponds, The URL information gathering section 17 which collects the information on each homepage accessed by the URL issue section 16, It has the transceiver processing section 19 which accesses the retrieval result editorial department 18 which edits the collected URL information and transmits to a client 3, and the Internet, and performs transmit/receive control of a signal.

[0026] Next, actuation of the Internet retrieval server of the above-mentioned configuration is explained. If URL of the retrieval server 10 is specified through in the company [LAN / 1] from a client 3 and there is access as shown in drawing 3 , the retrieval homepage issue section 12 of the retrieval server 10 will publish a retrieval homepage (Home Page), and will transmit to a client 3 (step S1).

[0027] In a client 3, a user inputs retrieval conditions for procedure explanation of this retrieval homepage according to reading and a predetermined procedure. Now, the retrieval conditions inputted from the client 3 presuppose that they were the contents shown in A1 of drawing 4 . That is, in the retrieval condition element extract section 13 of the "retrieval to know price of each store since he wants to purchase personal computer of B company in A area" server 10, if retrieval conditions are received from a client 3 (step S2), a retrieval condition element will be extracted (step S3). Here, the element "A area", a "B company personal computer", and "each store price" is extracted (A2).

[0028] Then, the URL retrieval section 14 extracts the keyword contained in a retrieval condition

element from the keyword table 21 of the URL data base 11, and takes up URL which has listed the extracted keyword from the URL table 22 (step S4). Here, URL1 - URLX are taken up as optimal URL (A3).

[0029] Then, about some URL1 which the URL retrieval section 14 took up in the URL issue sequence Processing Division 15 - URLX, based on certain priority conditions, it opts for the issue procedure of the URL address so that efficient retrieval can be performed (step S5). The method to which priority is given from URL which has the number of keywords which is best in agreement to the retrieval condition element of a client 3 is suitable for the decision of this priority foreword. However, priority conditions are set up beforehand, or priority conditions can be made to be able to check at the time of the retrieval condition input from a client 3, and giving priority to the technical field which gives priority to an area, giving priority to the name of a country, etc. can also adopt the method of setting up priority based on it. A4 shows the issue procedure for which it opted in this way.

[0030] Then, the URL issue section 16 publishes the URL address one by one about all URL listed according to the issue procedure for which it opted, accesses that homepage, and accumulates the information on that homepage in the URL information gathering section 17 one by one (step S6 and A5 of drawing 4).

[0031] In this way, if information gathering to last URL3 is completed according to a predetermined address issue procedure, the retrieval result editorial department 18 will edit collection information into a predetermined report form, and will transmit to a client 3 (steps S8 and A6). [0032] Now, it is as follows when actuation of the above-mentioned Internet retrieval server is explained still more concretely.

[0033] Suppose that the retrieval conditions of wanting to know the sale price of each store of a B company personal computer were written in the retrieval homepage which the retrieval server published from the client 3 in the Tokyo area.

[0034] If retrieval condition elements, such as the "Tokyo area", a "personal computer", "B company", and a "price", are extracted by the retrieval condition element detecting element 13 and the URL retrieval section 14 receives this in the retrieval server which received this URL by which "Tokyo", "Shinjuku", and "Shibuya" are listed as an area included in the "Tokyo area" is made into a candidate. URL by which the "personal computer" or the "personal computer", the "computer", and the "computer" are listed as a keyword relevant to a "B company personal computer" will be made into a candidate, and URL by which the "price" is listed further will be extracted as a candidate. Then, suppose that only URLa and URLb were taken up from the table 22 of drawing 6 .

[0035] Although it next determines whether these URLa(s) and URLb make priority either give in the URL issue sequence Processing Division 15, especially since the number of the keywords which were in agreement in this example is also equal and locally near, priority is not attached, but the information on that homepage is collected, information will be gathered in order of an extract, the address of URLa will be published first, the address of URLb will be published continuously, and information will be collected.

[0036] Then, the retrieval result collection section 18 will be edited into report format as shown in drawing 7 , and will transmit to a client 3. In addition, a "I store" is the identifier of the store which is opening the homepage of the address of URLa, and a "RO store" is the identifier of the store of the address of URLb here.

[0037] in this way, according to the Internet retrieval server of the gestalt of this operation, it is markedly alike in the time amount and the time and effort which the rest can take up URL corresponding to retrieval conditions by the Internet retrieval server side, can gather information, can obtain that result now as a report, and retrieval takes only with inputting retrieval conditions into the retrieval homepage which the user accessed URL of the Internet retrieval server and was opened from the client, and it can economize now.

[0038] In addition, although you may be the method which waits for while, as for the report from the Internet retrieval server, the client side had connected the circuit, and is obtained, after transmitting retrieval conditions, a circuit can once be cut, and the method which I have transmitted to the mail address of a client in the form of an electronic mail can also be taken here.

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] System configuration drawing of the gestalt of one operation of this invention.

[Drawing 2] The functional block diagram of the Internet retrieval server in the gestalt of the above-mentioned operation.

[Drawing 3] The flow chart of the retrieval processing by the gestalt of the above-mentioned operation.

[Drawing 4] The flow chart of the retrieval processing by the gestalt of the above-mentioned operation.

[Drawing 5] Explanatory drawing of the keyword table of the URL data base in the gestalt of the above-mentioned operation.

[Drawing 6] Explanatory drawing of the URL table of the URL data base in the gestalt of the above-mentioned operation.

[Drawing 7] Explanatory drawing of the report of the retrieval result in the gestalt of the above-mentioned operation.

[Drawing 8] System configuration drawing of the conventional example.

[Drawing 9] The block diagram of the general Internet.

[Description of Notations]

1 In the Company [LAN]

2 In-house Server

3 Client

4 Internet

5 Gateway

6 WWW Server

10 Retrieval Server

11 URL Data Base

12 Retrieval Homepage Issue Section

13 Retrieval Condition Element Extract Section

14 URL Retrieval Section

15 URL Issue Sequence Processing Division

16 URL Issue Section

17 URL Information Gathering Section

18 Retrieval Result Editorial Department

19 Transceiver Processing Section

21 Keyword Table

22 URL Table

[Translation done.]

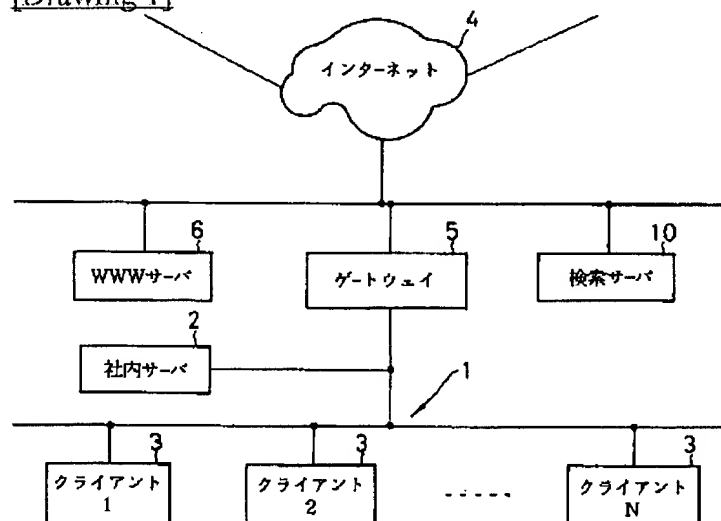
* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

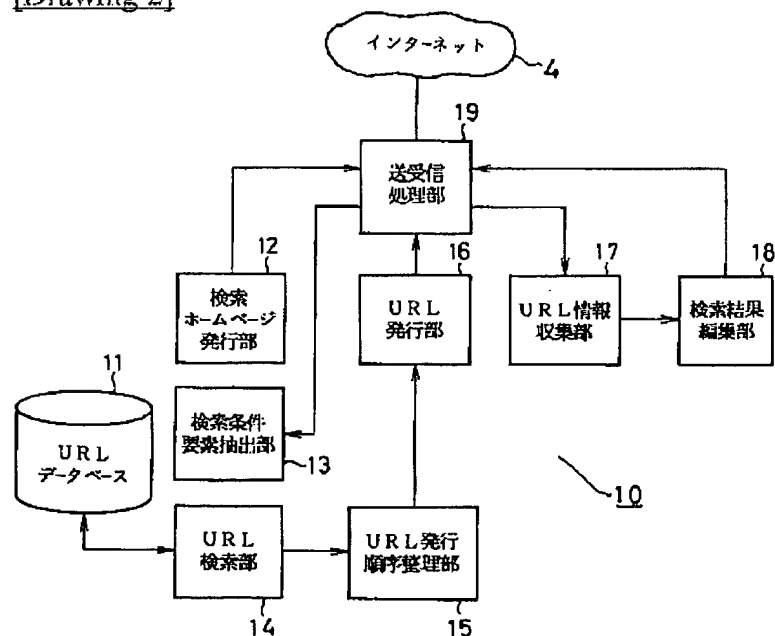
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

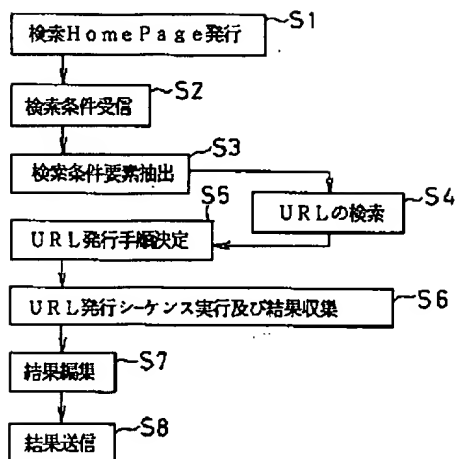
[Drawing 1]



[Drawing 2]



[Drawing 3]



[Drawing 5]

21

キーワード

パソコン、パーソナルコンピュータ、計算機
 電子計算機、マイコン、CPU、プリンタ、

 東京、大阪、名古屋、福岡、
 新宿、秋葉原、渋谷、横浜、

 家電、家庭電気製品、オーディオ、ビデオ、AV、
 VCR、TV、カメラ、ビデオカメラ、

 量販店、専門店、通信販売、価格、

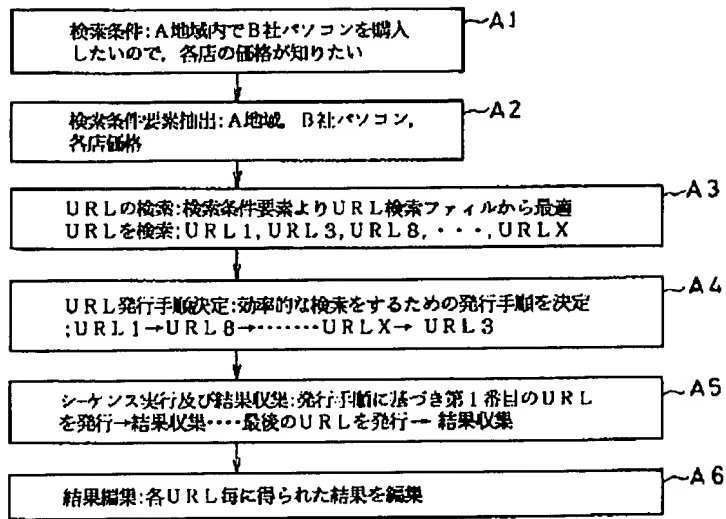
[Drawing 7]

ご依頼情報のサーチレポート

B社Aタイプの価格リストは次の通りです。

型名	イ店	ロ店
α	253,000	264,000
β	324,000	314,000
γ	355,000	380,000
δ	425,800	415,800
ε	518,000	500,000

[Drawing 4]

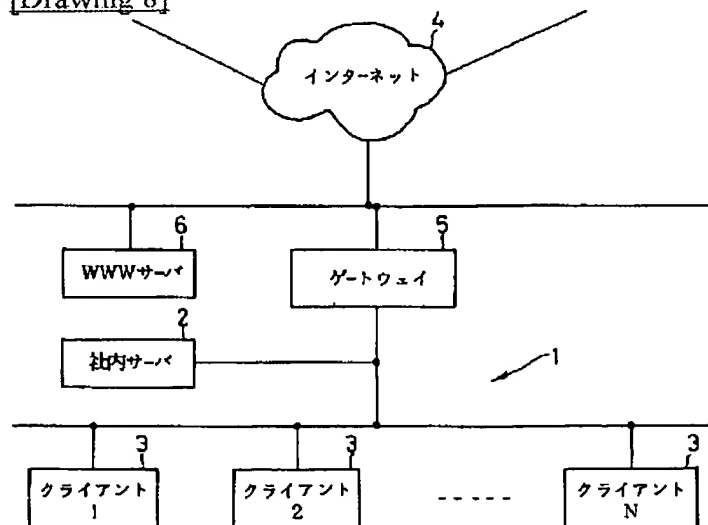


[Drawing 6]

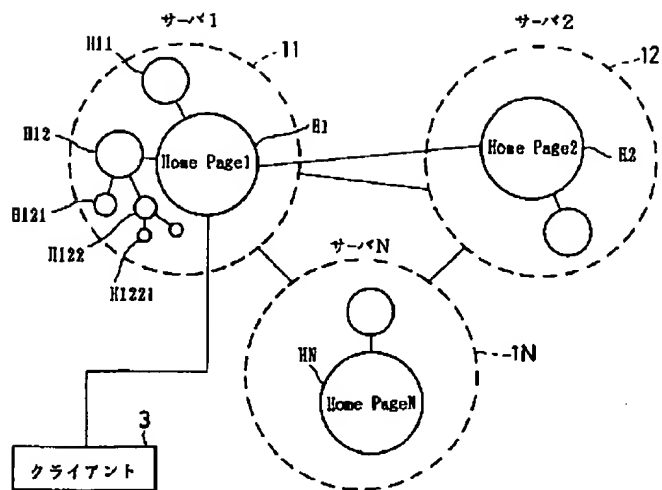
URLリスト 22

URLa	http://WWW.tokyo.co.jp/sibaden
キーワード	パソコン, パーナルコンピュータ, 計算機, プリンタ, CPU, 東京, 渋谷, 量販店, 通信販売, 価格, ...
URLb	http://WWW.kanto.or.jp/tokaden
キーワード	家電, パソコン, CPU, マイク, 東京, 新宿, 量販店, 価格, ...
URLc	http://WWW.osaka.co.jp/sakaden
キーワード	パソコン, プリンタ, ｵｰｼｮ, ｻｲﾍﾞ, 家電, 大阪, 中之島, 量販店, 通信販売, 価格, ...
URId	http://WWW.tokyo.co.jp/yasucan
キーワード	カメラ, 写真機, ビデオカメラ, ビデオ, 東京, 新宿, 量販店, 価格, ...

[Drawing 8]



[Drawing 9]



[Translation done.]

(19) 日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11) 特許出願公開番号

特開平9-311869

(43) 公開日 平成9年(1997)12月2日

(51) Int.Cl. ⁶	識別記号	庁内整理番号	F I	技術表示箇所
G 0 6 F 17/30			G 0 6 F 15/403	3 3 0 C
12/00	5 4 5		12/00	5 4 5 A
	5 4 7			5 4 7 H
13/00	3 5 7		13/00	3 5 7 Z
H 0 4 L 12/00		9466-5K	H 0 4 L 11/00	
審査請求 未請求 請求項の数 3 O L (全 7 頁)				

(21) 出願番号 特願平8-130283

(22) 出願日 平成8年(1996)5月24日

(71) 出願人 000003078

株式会社東芝

神奈川県川崎市幸区堀川町72番地

(72) 発明者 黒澤 治弘

東京都港区芝浦一丁目1番1号 株式会社

東芝本社事務所内

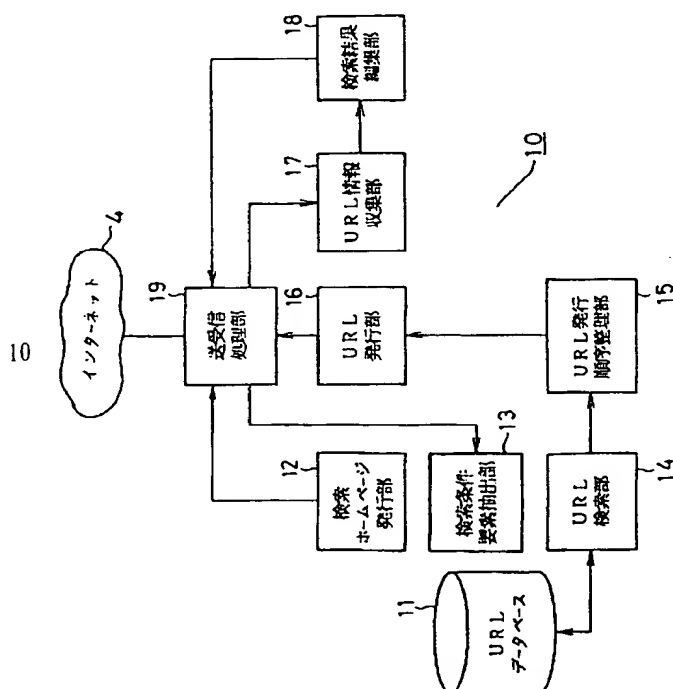
(74) 代理人 弁理士 三好 秀和 (外3名)

(54) 【発明の名称】 インターネット検索サーバ

(57) 【要約】

【課題】 クライアントから検索条件を入力するだけでWWWの多数のURLから所望の情報を得てそのレポートを配信できる検索サーバを実現する。

【解決手段】 このインターネット検索サーバは、クライアント3から検索要求が送られてくると、まず検索ホームページ発行部12がそのクライアントに検索ホームページを発行して、クライアントに検索条件を書き込ませ、書き込まれた検索条件を検索条件要素抽出部13によって解析して検索条件要素を抽出し、この検索条件要素について、URL検索部14がURLデータベース11にアクセスして関連する情報を提供しているURLを抽出する。そして抽出されたURLについて、URL情報収集部16、17がそれぞれのURLアドレスを順次発行し、該当するURLからの情報を収集し、その収集結果を編集部18で編集してクライアントに送信する。



1

【特許請求の範囲】

【請求項1】 クライアントに検索ホームページを発行する検索ホームページ発行部と、前記クライアントが前記検索ホームページに書き込んだ検索条件を受信する検索条件受信部と、前記検索条件受信部で受信した前記検索条件を解析し、検索条件要素を抽出する検索条件要素抽出部と、種々の検索条件要素とそれぞれに対応するURLを対照したURLデータベースと、前記検索条件要素抽出部が抽出した検索条件要素について、前記URLデータベースにアクセスして該当するURLを検索するURL検索部と、前記URL検索部の検索結果に基づき、それぞれのURLアドレスを順次発行して該当するURLからの情報を収集するURL情報収集部と、前記URL情報収集部が収集した前記URL情報を前記クライアントに送信するURL情報送信部とを備えて成るインターネット検索サーバ。

【請求項2】 前記URL検索部が検索した複数のURLについて、所定の優先条件に基づいてそれらのアドレス発行手順を決定し、その順序で前記URL情報収集部に渡すURL発行手順決定部を備えて成る請求項1記載のインターネット検索サーバ。

【請求項3】 前記URL情報送信部が、前記URL情報収集部の収集した前記URL情報を所定の様式に編集する機能を備えて成る請求項2記載のインターネット検索サーバ。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明はインターネット検索サーバに関する。

【0002】

【従来の技術】近年、インターネットの普及は急激に進んでおり、コンピュータの一般ユーザが手軽にWWW (World Wide Web) ブラウザを用いてアクセスしてWWW上に開いている種々のホームページを読み込み、必要な情報を得ることができる。

【0003】図8は従来のインターネットと社内LANとの接続システムの構成を示しており、社内LAN1には社内サーバ2とこれに接続される、WWWブラウザ機能を有する多数のクライアント3があり、外部のインターネット4にはセキュリティも兼ねたゲートウェイ5を介して接続されている。WWWサーバ6は社内、社外にWWWサービスを提供するものである。

【0004】

【発明が解決しようとする課題】インターネットの普及と共に世界中で多数のWWWサーバが接続され、それぞれのWWWサーバは独自のホームページを開いて、それにアクセスするためにはURL (Uniform Resource Locator) を指定する必要が

2

ある。

【0005】ところが、図9に示すようにWWW上に開かれているホームページの数は無数に上り、あるクライアント3がWWWにアクセスして自分が真に必要としている情報を得ようとする場合には、必要とする情報を提供してくれるURLをWWW上で最初から特定するのは困難であり、例えば、最初に1つのWWWサーバ1のホームページH1にアクセスし、このホームページH1にハイパーリンク形式でつながっている関連するさらに下層のホームページH11、H12；H121、H122；H1221、…などにアクセスしたり、あるいは他のWWWサーバ2、サーバ3、…のホームページに移っていく方法をとらなければならない。

【0006】そこで、このようにいわば手探り、やみくもな方法でWWWにアクセスするのでは、本当に必要とする情報を収集するには多くの時間がかかることになるため、市販されているいわゆるイエローページをあらかじめ参考にしてURLをピックアップしておき、そのURLにアクセスする方法をとるか、あるいはWWW上に提供されている検索サービスのホームページのURLにまずアクセスして、そこで自分が必要としている情報を提供してくれるURLを見つけ出し、その後、見つけたURLに再度アクセスするという方法をとることがある。

【0007】しかしながら、この場合でもクライアントは自分で必要とする情報を提供してくれそうなホームページのURLを自分で検索し、そのURLをピックアップしてそれぞれにアクセスする必要がある、必要な情報収集になお、時間と手間がかかる問題点があった。

【0008】さらに開いたホームページの情報の中から本当に必要としている情報だけを選択して収集するのに適当な手段は見られない。

【0009】本発明はこのような従来の問題点に鑑みてなされたもので、クライアントから検索要求が検索条件を入力させるための検索ホームページを発行し、そこにクライアントに検索条件を書き込ませ、その検索条件情報を受信した後は、検索条件から検索条件要素を自動的に抽出し、さらにサーバ自身が備えているURLデータベースを活用してURLを抽出し、そのURLアドレスそれぞれに自動的にアクセスして情報を順次、自動的に収集し、検索結果をクライアントに送信する手順を取り、クライアントの要求に応じてきめ細かな検索情報サービスができるインターネット検索サーバを提供することを目的とする。

【0010】

【課題を解決するための手段】請求項1の発明のインターネット検索サーバは、クライアントに検索ホームページを発行する検索ホームページ発行部と、前記クライアントが前記検索ホームページに書き込んだ検索条件を受信する検索条件受信部と、前記検索条件受信部で受信し

3

た前記検索条件を解析し、検索条件要素を抽出する検索条件要素抽出部と、種々の検索条件要素とそれぞれに対応するURLを対照したURLデータベースと、前記検索条件要素抽出部が抽出した検索条件要素について、前記URLデータベースにアクセスして該当するURLを検索するURL検索部と、前記URL検索部の検索結果に基づき、それぞれのURLアドレスを順次発行して該当するURLからの情報を収集するURL情報収集部と、前記URL情報収集部が収集した前記URL情報を前記クライアントに送信するURL情報送信部とを備えたものである。

【0011】この請求項1の発明のインターネット検索サーバでは、クライアントから検索要求がインターネットを通じて送られてくると、まず検索ホームページ発行部がそのクライアントに検索ホームページを発行して、クライアントに検索条件を書き込ませる。

【0012】そこでクライアントが検索ホームページに書き込めば、その書き込まれた検索条件を検索条件受信部で受信し、検索条件要素抽出部によって検索条件を解析し、検索条件要素を抽出し、さらに検索条件要素抽出部が抽出した検索条件要素について、URL検索部がURLデータベースにアクセスして関連する情報を提供しているURLを抽出する。そしてURL検索部が抽出したURLについて、URL情報収集部がそれぞれのURLアドレスを順次発行し、該当するURLからの情報を収集し、その収集結果をURL情報送信部によってクライアントに送信する。

【0013】こうして、クライアントから検索要求があれば、その検索条件を自身のホームページに書き込ませ、その検索条件要素を解析し、該当する情報を提供しているURLを抽出し、それらのURLに自動的にアクセスして情報を収集し、その結果をクライアントに提供することができ、クライアントとしては検索条件の指定だけで所望の情報を入手することができるようになり、インターネットを利用した情報収集がきわめて容易になる。

【0014】請求項2の発明は、請求項1のインターネット検索サーバにおいてさらに、前記URL検索部が検索した複数のURLについて、所定の優先条件に基づいてそれらのアドレス発行手順を決定し、その順序で前記URL情報収集部に渡すURL発行手順決定部を備えたものである。

【0015】この請求項2の発明のインターネット検索サーバでは、URL検索部が検索した複数のURLについて、発行手順決定部が所定の優先順位決定条件に則ってアドレス発行手順を決定し、決定されたURLアドレスの発行手順に従ってURL情報収集部が順次該当するURLにアクセスして情報収集する。

【0016】したがって、検索されたすべてのURLについて無秩序にアクセスするよりも効率的な情報収集が

4

できる。

【0017】請求項3の発明は、請求項2のインターネット検索サーバにおいて、前記URL情報送信部が、前記URL情報収集部の収集した前記URL情報を所定の様式に編集する機能を備えたものである。

【0018】この請求項3の発明のインターネット検索サーバでは、URL情報収集部が収集した多数のURL情報をURL情報送信部で所定の様式に編集してクライアントに送信することができ、クライアントには検索条件に合致して必要な情報だけが分かりやすい形で配信できることになる。

【0019】

【発明の実施の形態】以下、本発明の実施の形態を図に基づいて詳説する。図1は本発明の1つの実施の形態のシステム構成を示しており、社内LAN1は社内サーバ2に多数のクライアント3を接続した形で構成されている。そして社内LAN1とインターネット4とはセキュリティの目的を兼ねたゲートウェイ5を介して接続されている。この社内LAN1にはWWWサーバ6も用意されている。

【0020】本発明の特徴はこのようなインターネットシステムにおいて、さらに検索サーバ10を接続した点にある。そしてこの検索サーバ10は図2に示す機能構成を有するコンピュータで構成される。

【0021】検索サーバ10は検索条件要素となる多数のキーワードと、それらのキーワードに関連するURLとの対照テーブルで成るURLデータベース11を備えている。一例を挙げれば、図5及び図6に示す内容である。図5はキーワードテーブル21であり、図6に示すURLテーブル22において使用されているキーワードをリストアップしたものである。したがって、このキーワードテーブル21にリストアップされていなければ検索不可とされることになる。図6に示すURLテーブル22は、多数のURLとそれぞれに関係があるキーワードとの対照テーブルである。例えば、<http://www.tokyo.co.jp/sibaden>というURLは、東京、渋谷にある量販店で通信販売をも行っていて、取扱品目はパソコン関連商品全般ということになる。また価格リストも掲載していることを示している。

【0022】また、

<http://www.osaka.co.jp/sakaden>

というURLは、大阪、中之島にあるパソコン関連商品も取り扱っている家電製品の量販店で、通信販売も行っており、価格リストも掲載していることを示している。

【0023】そして検索サーバ10はこのURLデータベース11のURLテーブル22を定期的に更新する必要がある、現在、いわゆるインターネットロボットと称されている各種の自動検索ツールを利用して行う。

【0024】検索サーバ10はまた、ユーザーに検索要求手順を説明し、また検索条件を入力させるための検索

50

5

ホームページを発行する検索ホームページ発行部12と、この検索ホームページ発行部12が発行する検索ホームページを通じてクライアント3から入力された検索条件を解析し、検索条件要素を抽出する検索条件要素抽出部13と、この検索条件要素抽出部13で抽出された検索条件要素に基づき、URLデータベース11のキーワードテーブル21とURLテーブル22のキーワードリストを参照して、一致するキーワードがリストアップされているURLをピックアップするURL検索部14と、このURL検索部14がピックアップした複数のURLについて、あらかじめ設定されている優先条件に基づき、いずれのURLから発行するかを順序決定するURL発行順序整理部15を備えている。

【0025】検索サーバ10はさらに、URL発行順序整理部15によって順序づけられた複数のURLについて、順次、URLを発行してWWWの該当するアドレスのホームページにアクセスするURL発行部16と、URL発行部16によってアクセスされたホームページそれぞれの情報を収集するURL情報収集部17と、収集したURL情報を編集してクライアント3に送信する検索結果編集部18と、そしてインターネットに接続して信号の送受信制御を行う送受信処理部19を備えている。

【0026】次に、上記構成のインターネット検索サーバの動作について説明する。図3に示すように、クライアント3から社内LAN1を通じて検索サーバ10のURLを指定してアクセスがあると、検索サーバ10の検索ホームページ発行部12は検索ホームページ（Home Page）を発行してクライアント3に送信する（ステップS1）。

【0027】クライアント3ではユーザがこの検索ホームページの手続説明を読み、所定の手順に従って検索条件を入力する。いま、クライアント3から入力された検索条件は、図4のA1に示す内容であったとする。すなわち、「A地域内でB社のパソコンを購入したいので、各店の価格が知りたい。」検索サーバ10の検索条件要素抽出部13では、クライアント3から検索条件を受信すると（ステップS2）、検索条件要素を抽出する（ステップS3）。ここでは、「A地域」、「B社パソコン」、「各店価格」という要素を抽出する（A2）。

【0028】続いてURL検索部14がURLデータベース11のキーワードテーブル21から検索条件要素に含まれるキーワードを抽出し、抽出したキーワードをリストアップしているURLをURLテーブル22からピックアップする（ステップS4）。ここでは、最適URLとしてURL1～URLXがピックアップされている（A3）。

【0029】続いてURL発行順序整理部15においてURL検索部14がピックアップしたいくつかのURL1～URLXについて、効率的な検索ができるように一

6

定の優先条件に基づいてURLアドレスの発行手順を決定する（ステップS5）。この優先順序の決定には、クライアント3の検索条件要素に最も良く一致するキーワード数を有するURLから優先する方法が適当である。しかしながら、地域を優先する、技術分野を優先する、国名を優先するなど、あらかじめ優先条件を設定しておき、あるいはクライアント3からの検索条件入力時に、優先条件をチェックさせ、それに基づいて優先順位を設定する方法も採用することができる。A4はこうして決定された発行手順を示している。

【0030】この後、URL発行部16は決定された発行手順に従ってリストアップされているすべてのURLについて順次、URLアドレスを発行してそのホームページにアクセスし、そのホームページの情報を順次、URL情報収集部17に蓄積していく（ステップS6及び図4のA5）。

【0031】こうして所定のアドレス発行手順に従い、最後のURL3までの情報収集が完了すると、検索結果編集部18が収集情報を所定のレポート様式に編集してクライアント3に送信する（ステップS8及びA6）。

【0032】いま、上記のインターネット検索サーバの動作をさらに具体的に説明すると、次のようになる。

【0033】クライアント3から、検索サーバの発行した検索ホームページに東京地域で、B社パソコンの各店の売り価格を知りたいという検索条件が書き込まれたとする。

【0034】これを受信した検索サーバでは、検索条件要素抽出部13で「東京地域」、「パソコン」、「B社」、「価格」といった検索条件要素を抽出し、これをURL検索部14が受け取ると、「東京地域」に含まれる地域として「東京」、「新宿」、「渋谷」がリストアップされているURLを候補とし、「B社パソコン」に関連するキーワードとして「パソコン」あるいは「パーソナルコンピュータ」、「計算機」、「電子計算機」がリストアップされているURLを候補とし、さらに「価格」もリストアップされているURLを候補として抽出することになる。そこで、図6のテーブル22からは、URLa、URLbだけがピックアップされたとする。

【0035】次には、URL発行順序整理部15でこれらのURLa、URLbのどちらから優先させるかを決定するのであるが、この例では一致したキーワードの数も等しく、地域的にも近いので特に優先順位を付けず、抽出順に情報収集することにし、まずURLaのアドレスを発行してそのホームページの情報を収集し、続いてURLbのアドレスを発行して情報を収集することになる。

【0036】この後、検索結果編集部18は図7に示すようなレポート形式に編集してクライアント3に送信することになる。なお、ここで「イ店」はURLaのアドレスのホームページを開いている店の名前前で、「ロ店」

10

20

30

40

50

7

はURLのアドレスの店の名前である。

【0037】こうしてこの実施の形態のインターネット検索サーバによれば、クライアントからユーザがインターネット検索サーバのURLにアクセスし、開かれた検索ホームページに検索条件を入力するだけで、後はインターネット検索サーバ側で検索条件に合致するURLをピックアップして情報収集し、その結果をレポートとして得ることができるようになり、検索に要する時間、手間を格段に節約することができるようになる。

【0038】なお、ここでインターネット検索サーバからのレポートはクライアント側が回線を接続したまま待つて得る方式であっても良いが、また検索条件を送信した後は回線をいったん切断し、電子メールの形でクライアントのメールアドレスに送信しておいてもらう方式をとることもできる。

【0039】

【発明の効果】以上のように請求項1の発明によれば、クライアントから検索要求があれば、その検索条件を自身のホームページに書き込ませ、その検索条件要素を解析し、該当する情報を提供しているURLを抽出し、それらのURLに自動的にアクセスして情報を収集し、その結果をクライアントに提供するようにしているので、クライアントとしては検索条件の指定だけで所望の情報を入手することができ、インターネットを利用した情報収集がきわめて容易になる。

【0040】請求項2の発明によれば、クライアントの検索条件に基づいてURL検索部が抽出した複数のURLについて、所定の優先順位決定条件に則ってアドレス発行手順を決定し、決定されたURLアドレスの発行手順に従って順次該当するURLにアクセスして情報収集するようにしているので、クライアントの検索条件に基づいて抽出されたすべてのURLについて無秩序にアクセスするよりも効率的な情報収集ができる。

【0041】請求項3の発明によれば、URL情報収集部が収集した多数のURL情報をURL情報送信部で所定の様式に編集してクライアントに送信することができ、クライアントには検索条件に合致して必要な情報だ

8

けが分かりやすい形で配信できる。

【図面の簡単な説明】

【図1】本発明の1つの実施の形態のシステム構成図。

【図2】上記の実施の形態におけるインターネット検索サーバの機能ブロック図。

【図3】上記の実施の形態による検索処理のフローチャート。

【図4】上記の実施の形態による検索処理のフローチャート。

10 【図5】上記の実施の形態におけるURLデータベースのキーワードテーブルの説明図。

【図6】上記の実施の形態におけるURLデータベースのURLテーブルの説明図。

【図7】上記の実施の形態における検索結果のレポートの説明図。

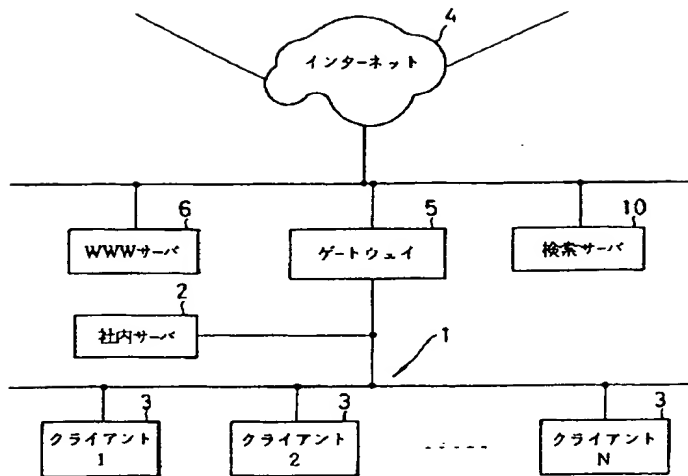
【図8】従来例のシステム構成図。

【図9】一般的なインターネットの構成図。

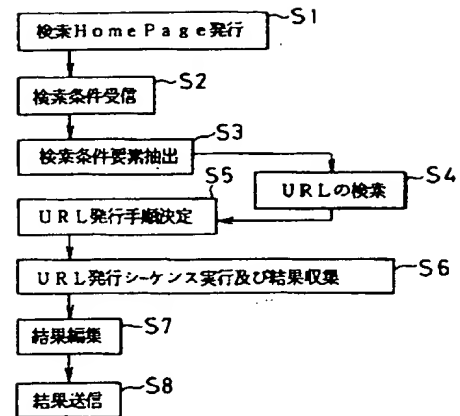
【符号の説明】

- | | |
|----|-------------|
| 1 | 社内LAN |
| 2 | 社内サーバ |
| 3 | クライアント |
| 4 | インターネット |
| 5 | ゲートウェイ |
| 6 | WWWサーバ |
| 10 | 検索サーバ |
| 11 | URLデータベース |
| 12 | 検索ホームページ発行部 |
| 13 | 検索条件要素抽出部 |
| 14 | URL検索部 |
| 15 | URL発行順序整理部 |
| 16 | URL発行部 |
| 17 | URL情報収集部 |
| 18 | 検索結果編集部 |
| 19 | 送受信処理部 |
| 21 | キーワードテーブル |
| 22 | URLテーブル |

【図 1】

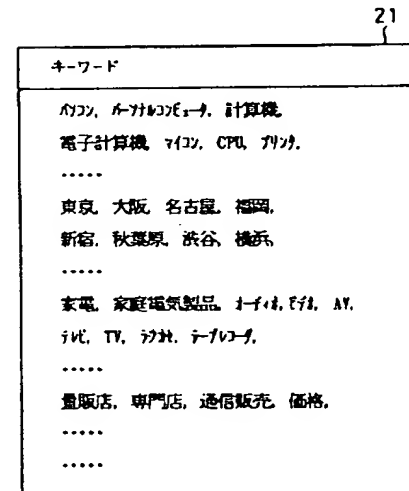
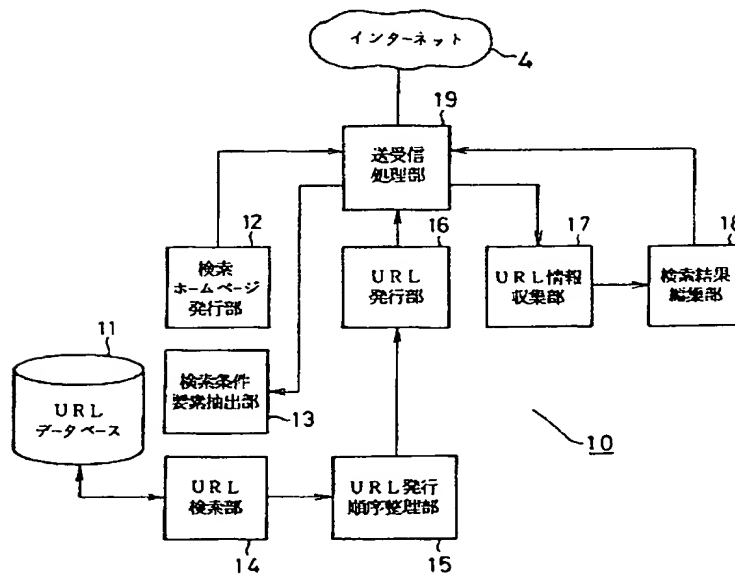


【図 3】



【図 5】

【図 2】



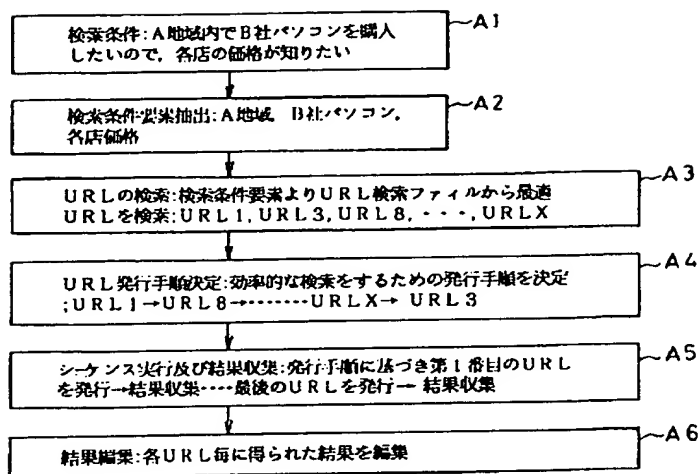
【図 7】

ご依頼情報のサーチレポート

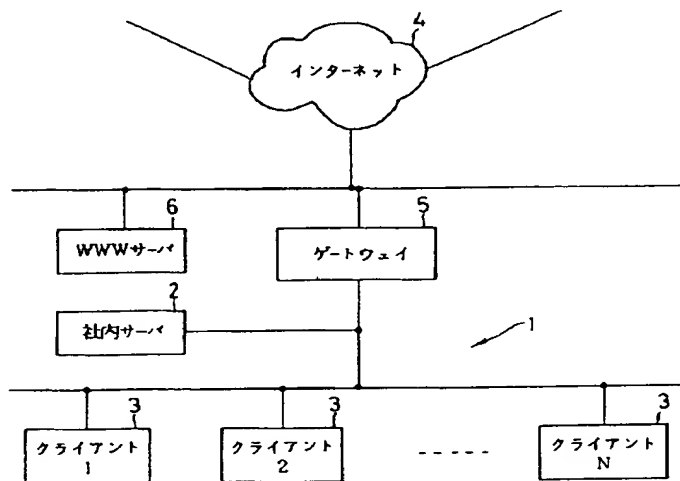
※お探しの価格等は次の通りです。

型名	1店	2店
α	253,000	264,000
β	324,000	314,000
γ	355,000	360,000
δ	425,800	415,800
τ	518,000	500,000

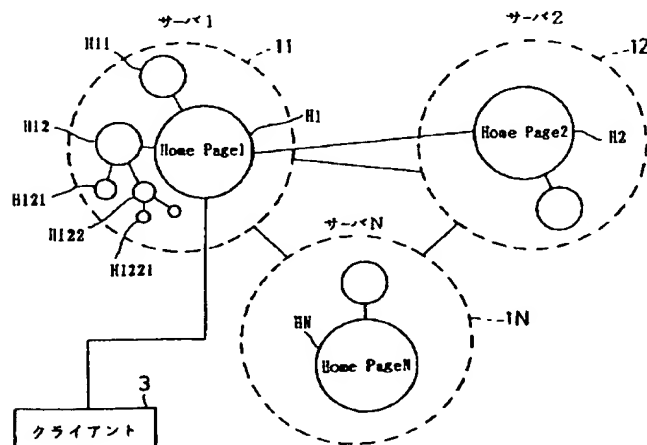
【図4】



【図8】



【図9】



【図6】

22

URLリスト	
URLa	http://WWW.tokyo.co.jp/sibaden
キーワード	パソコン、パーソナルコンピュータ、計算機、プリンタ、CPU、東京、渋谷、量販店、通信販売、価格、...
URLb	http://WWW.kanto.or.jp/tokaden
キーワード	家電、パソコン、CPU、プリンタ、東京、新宿、量販店、価格、...
URLc	http://WWW.osaka.co.jp/sakaden
キーワード	パソコン、プリンタ、プリンタ、プリンタ、家電、大阪、中之島、量販店、通信販売、価格、...
URLd	http://WWW.tokyo.co.jp/yasucan
キーワード	カメラ、写真機、カメラ、カメラ、東京、新宿、量販店、価格、...
